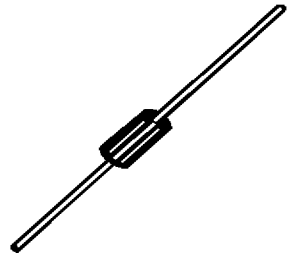
查询TPB100RL供应商

TPB SERIES

TRISIL™

FEATURES

- BIDIRECTIONAL CROWBAR PROTECTION.
- VOLTAGE RANGE: FROM 62 V TO 270 V.
- HOLDING CURRENT :
  I_H = 150mA min.
- REPETITIVE PEAK PULSE CURRENT :
  I_{PP} = 100 A, 10/1000 µs.
- UL RECOGNIZED FILE # E136224



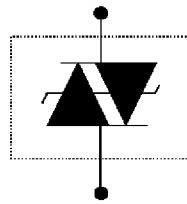
CB429

DESCRIPTION

The TPB series are TRISIL devices especially designed for protecting sensitive telecommunication equipment against lightning and transient voltages induced by AC power lines. They are available in the CB429 axial package.

TRISIL devices provide bidirectional protection by crowbar action. Their characteristic response to transient overvoltages makes them particularly suited to protect voltage sensitive telecommunication equipment.

SCHEMATIC DIAGRAM



COMPLIES WITH THE FOLLOWING STANDARDS:	Peak Surge Voltage (V)	Voltage Waveform (µs)	Current Waveform (µs)	Admissible Ipp (A)	Necessary Resistor (Ω)
CCITT K20	4000	10/700	5/310	100	-
VDE0433	4000	10/700	5/310	100	-
VDE0878	4000	1.2/50	1/20	100	-
IEC-1000-4-5	level 4 level 4	10/700 1.2/50	5/310 8/20	100 100	- -
FCC Part 68, lightning surge type A	1500 800	10/160 10/560	10/160 10/560	200 100	- -
FCC Part 68, lightning surge type B	100	5/320	5/320	25	-
BELLCORE TR-NWT-001089 First level	2500 1000	2/10 10/1000	2/10 10/1000	500 100	- -
BELLCORE TR-NWT-001089 Second level	500	2/10	2/10	500	-
CNET I31-24	4000	0.5/700	0.8/310	100	-

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TPB SERIES

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25°C)

Symbol	Parameter		Value	Unit
P	Power dissipation on infinite heatsink	T_{amb} = 50 °C	5	W
I_{PP}	Peak pulse current	10/1000 µs 8/20 µs 2/10 µs	100 150 500	A
I_{TSM}	Non repetitive surge peak on-state current	tp = 20 ms	50	A
I^2t	I^2t value for fusing	tp = 20 ms	25	A^2s
dV/dt	Critical rate of rise of off-state voltage	V_{RM}	5	kV/µs
T_{stg} T_j	Storage temperature range Maximum junction temperature		- 55 to + 150 150	°C °C
T_L	Maximum lead temperature for soldering during 10s at 5mm for case		230	°C

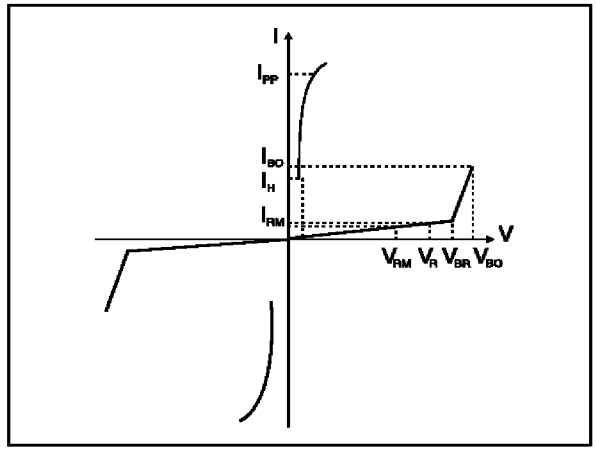
THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R_{th} (j-l)	Junction to leads (L_{lead} = 10mm)	20	°C/W
R_{th} (j-a)	Junction to ambient on printed circuit (L_{lead} = 10 mm)	75	°C/W

ELECTRICAL CHARACTERISTICS

(T_{amb} = 25°C)

Symbol	Parameter
V_{RM}	Stand-off voltage
I_{RM}	Leakage current at stand-off voltage
V_R	Continuous Reverse voltage
V_{BR}	Breakdown voltage
V_{BO}	Breakover voltage
I_H	Holding current
I_{BO}	Breakover current
I_{PP}	Peak pulse current
C	Capacitance



Type	I_{RM} @ V_{RM} max.		I_R @ V_R max. note1		V_{BO} @ I_{BO} max. note2		I_H min. note3	C max. note4
	µA	V	µA	V	V	mA	mA	pF
TPB62	2	56	50	62	82	800	150	300
TPB68	2	61	50	68	90	800	150	300
TPB100	2	90	50	100	133	800	150	200
TPB120	2	108	50	120	160	800	150	200
TPB130	2	117	50	130	173	800	150	200
TPB180	2	162	50	180	240	800	150	200
TPB200	2	180	50	200	267	800	150	200
TPB220	2	198	50	220	293	800	150	200
TPB240	2	216	50	240	320	800	150	200
TPB270	2	243	50	270	360	800	150	200

Note 1: I_R measured at V_R guarantees $V_{BRmin} \geq V_R$
Note 2: Measured at 50 Hz (1 cycle) - See test circuit 1.
Note 3: See test circuit 2.
Note 4: V_R = 1V, F = 1MHz, refer to fig.3 for C versus V_R

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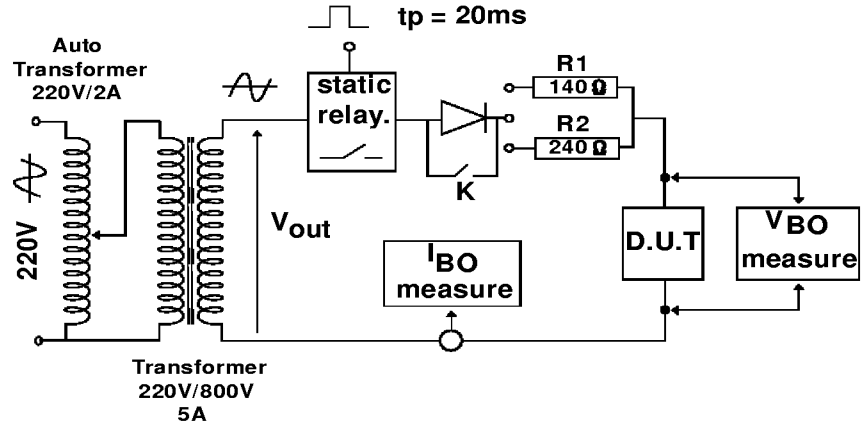
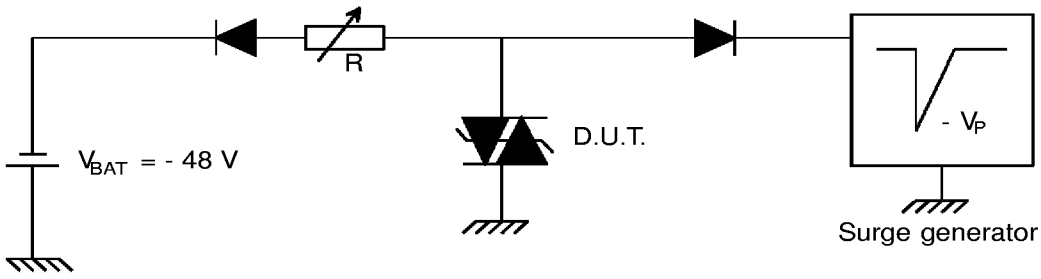
TEST CIRCUIT 1 FOR I_{BO} and V_{BO} parameters :



TEST PROCEDURE :

- Pulse Test duration (tp = 20ms):
  - For Bidirectional devices = Switch K is closed
  - For Unidirectional devices = Switch K is open.
- V_{OUT} Selection
  - Device with $V_{BO} \leq 200$ Volt
    - $V_{OUT} = 250\ V_{RMS}$, $R_1 = 140\ \Omega$.
  - Device with $V_{BO} \geq 200$ Volt
    - $V_{OUT} = 480\ V_{RMS}$, $R_2 = 240\ \Omega$.

TEST CIRCUIT 2 for I_H parameter



This is a GO-NO GO test which allows to confirm the holding current (I_H) level in a functional test circuit.

TEST PROCEDURE :

- Adjust the current level at the I_H value by short circuiting the D.U.T.
- Fire the D.U.T. with a surge current : $I_{pp} = 10A$, 10/1000 µs.
- The D.U.T. will come back to the off-state within 50 ms max.

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Fig. 1: Non repetitive surge peak on-state current versus overload duration (Tj initial=25°C).

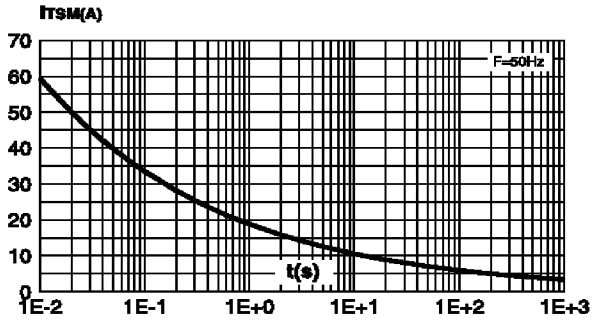


Fig. 2: Relative variation of holding current versus junction temperature.

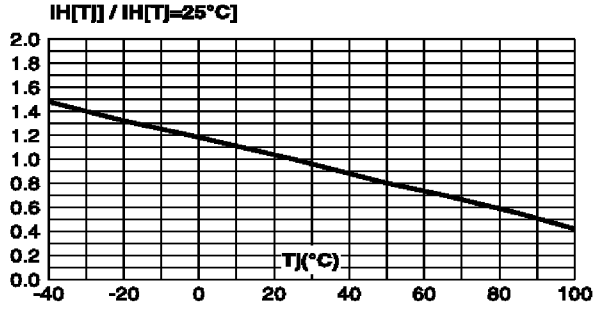


Fig. 3: Relative variation of junction capacitance versus reverse applied voltage(typical values). Note: For V_{RM} upper than 56V, the curve is extrapolated(dotted line).

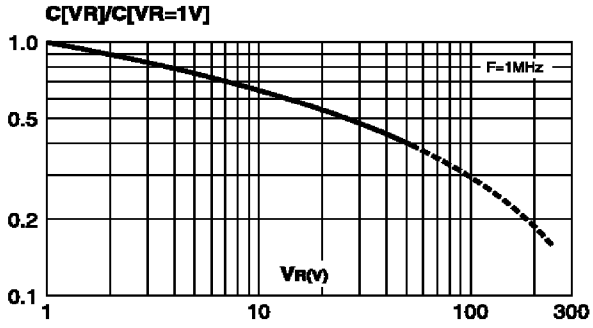


Fig. 4: On-state current versus on-state voltage (typical values).

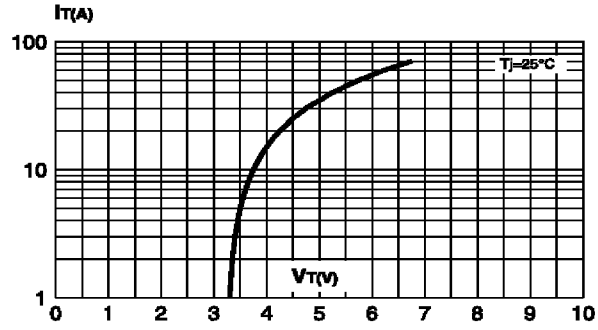
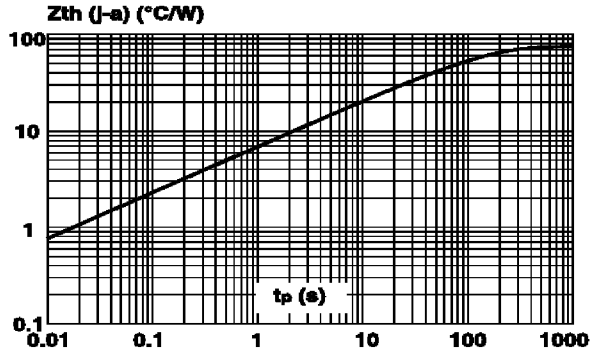


Fig. 5: Transient thermal impedance junction to ambient versus pulse duration (for FR4 PC Board with T_{Lead} = 10 mm).



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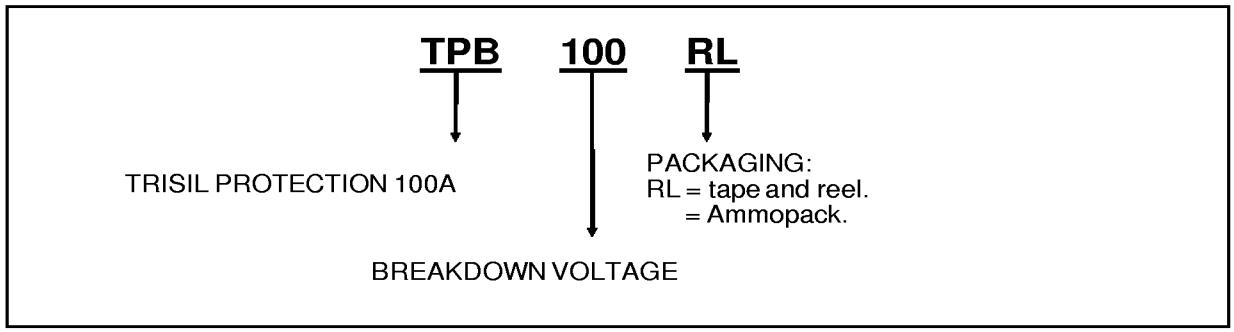
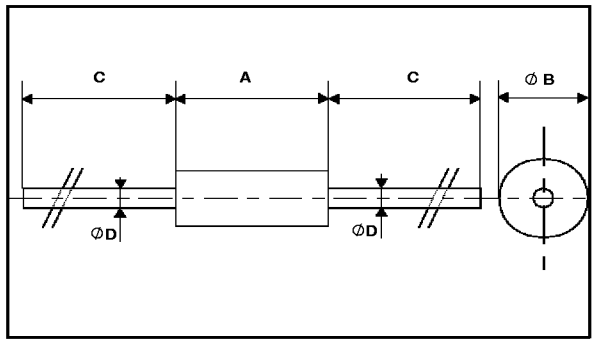
ORDER CODE



MARKING : Logo, Date Code, Part Number.

PACKAGE MECHANICAL DATA.

CB429 Plastic



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.45	9.50	9.80	0.372	0.374	0.386
B	26			1.024		
∅ C	4.90	5.00	5.10	0.193	0.197	0.201
∅ D	0.94	1.00	1.06	0.037	0.039	0.042
L1			1.27			0.050
note 1 : the lead is not controlled in zone L_1						

Packaging : Standard packaging is in tape and reel.

Weight : 0.85g

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